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| APPLICATION NO.                  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/077,954                       | 02/20/2002  | Makoto Horiuchi      | 2002_0234           | 3935             |
| 513                              | 7590        | 01/20/2004           | EXAMINER            |                  |
| WENDEROTH, LIND & PONACK, L.L.P. |             |                      | TRAN, THUY V        |                  |
| 2033 K STREET N. W.              |             |                      | ART UNIT            |                  |
| SUITE 800                        |             |                      | PAPER NUMBER        |                  |
| WASHINGTON, DC 20006-1021        |             |                      | 2821                |                  |

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |    |
|------------------------------|--------------------------------------|--|----|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/077,954 | <b>Applicant(s)</b><br>HORIUCHI ET AL. |    |
|                              | <b>Examiner</b><br>THUY V. TRAN      | <b>Art Unit</b><br>2821                | NW |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. 09/270,004.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This is a response to the Applicants' filing on 02/20/2002 and concurrent preliminary amendment. In this amendment, claims 10-30 and 32 are cancelled, and thus, claims 1-9 and 31 are now presented in the instant application.

#### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/270,004, filed on 03/16/1999.

#### ***Inventorship***

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### ***Information Disclosure Statement***

3. The information disclosure statement filed 02/20/2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

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*\*\*\* The Applicants are noted that the U.S. patents referred to in the IDS have been considered and that only the legible copies of the foreign patents referred to in the IDS are required to submit for consideration.*

***Specification Objection***

4. The specification of the disclosure is objected to because of the following informalities:

Page 1, line 2, after "1999", insert --, which is now U.S. Patent No. 6,368,175--.

Appropriate correction is required.

***Drawings Objection***

5. The drawings are objected to because of the following informalities:

Figs. 2A and 2B, change "Transmissirity" to --Transmissivity--.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections/ Minor Informalities***

6. Claims 1-4 and 9 are objected to because of the following informalities:

Claim 1, line 6, "the" should be deleted;

Claim 1, line 14, "the" (first occurrence) should be changed to --a--;

Claim 2, line 2, "portion" should be changed to --portions--; and --a-- should be inserted between "has" and "residual";

Claim 2, line 3, "the" (first occurrence) should be changed to --a--; and "the" (second occurrence) should be changed to --an--;

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Claim 2, line 4, --quartz-- should be inserted between “said” (first occurrence) and “glass”; and --pair of-- should be inserted between “said” (second occurrence) and “electrode”; and “electrode” should be changed to --electrodes--;

Claim 3, line 3, “the” should be changed to --a--; and --quartz-- should be inserted between “said” and “glass”;

Claim 4, line 3, --a-- should be inserted after “and”; and

Claim 9, line 2, “a” (first occurrence) should be changed to --the--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the recitation “wherein the contents of hydrogen, oxygen and their compounds ... spectrum of the noble gas” in lines 6-11 is confusing and not clearly understood; as such, it renders the claim indefinite. It appears that the recitation is directed to a ratio of a maximum intensity of the emission spectrum of hydrogen, oxygen, and their compounds, which are present in the light-emitting portion, to an intensity of a main emission spectrum of the noble gas which is 1/1000 or less. If the interpretation is correct, rewriting it in such a clear description is suggested. Clarification is required.

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Claims 2-9 and 31 are also rejected under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, since they are dependent on claim 1.

***Remarks***

9. The Applicants are noted that neither allowability indication(s) nor rejection(s) over art applies to claims 1-9 and 31 since they are defective.

***Citation of relevant prior art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art De Maagt et al. (U.S. Patent No. 5,986,405) discloses a high-pressure discharge lamp.

Prior art Karlotski et al. (U.S. Patent No. 5,905,340) discloses a high intensity discharge lamp.

Prior art Gens et al. (U.S. Patent No. 5,831,388) discloses a metal halide discharge lamp.

Prior art Mathews et al. (U.S. Patent No. 5,708,328) discloses a metal halide discharge lamp.

Prior art Bazin et al. (U.S. Patent No. 5,327,042) discloses a metal halide discharge lamp.

Prior art Russell et al. (U.S. Patent No. 5,212,424) discloses a metal halide discharge lamp.

Prior art Arlt et al. (U.S. Patent No. 5,017,839) discloses a high-pressure discharge lamp.

Prior art Nalepa (U.S. Patent No. 4,305,020) discloses a high intensity discharge lamp.

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*Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THUY V. TRAN whose telephone number is (571) 272-1828.

The examiner can normally be reached on M-F (8:30 AM-6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DON K. WONG can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

THUY V. TRAN  
Examiner  
Art Unit 2821

T.T.  
January 12<sup>th</sup>, 2004

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over the printed name and title.